

WHAT IS CLAIMED IS:

1 1. A thin film transistor array panel comprising:
2 a gate line formed on an insulating substrate;
3 a gate insulating layer on the gate line;
4 a semiconductor layer on the gate insulating layer;
5 a data line formed on the gate insulating layer;
6 a drain electrode formed at least in part on the semiconductor layer;
7 a color filter formed on the data line and the drain electrode;
8 a first passivation layer formed on the color filter; and
9 a pixel electrode formed on the color filter, connected to the drain electrode, overlapping
10 the first passivation layer, and enclosed by the first passivation layer.

1 2. The thin film transistor array panel of claim 1, wherein an overlapping portion of
2 the first passivation layer and the pixel electrode is disposed on the data line.

1 3. The thin film transistor array panel of claim 1, wherein edges of the pixel
2 electrode overlap the first passivation layer and the first passivation layer has an opening having
3 edges located near the edges of the pixel electrode.

1 4. The thin film transistor array panel of claim 1, wherein the data line includes a
2 pair of rectilinear portions connected to each other and making an angle of about 45 degrees.

1 5. The thin film transistor array panel of claim 1, further comprising a storage
2 electrode line formed on the substrate and including an expansion overlapping the pixel electrode
3 to form a storage capacitor.

1 6. The thin film transistor array panel of claim 5, wherein the drain electrode
2 includes an expansion overlapping the expansion of the storage electrode line.

1 7. The thin film transistor array panel of claim 1, wherein the first passivation layer
2 comprises at least one of organic insulator and inorganic insulating material.

1 8. The thin film transistor array panel of claim 1, wherein the first passivation layer
2 is made of photosensitive material.

1 9. The thin film transistor array panel of claim 1, further comprising a second
2 passivation layer disposed between the color filters and the data line.

1 10. The thin film transistor array panel of claim 1, wherein the second passivation
2 layer has a contact hole exposing at least a portion of the drain electrode, the color filter has an
3 opening disposed on the drain electrode, and the pixel electrode is connected to the drain
4 electrode through the opening and the contact hole.

1 11. The thin film transistor array panel of claim 1, further comprising a contact
2 assistant formed on a portion of the gate line or a portion of the data line and made of the same
3 material as the pixel electrode.

1 12. The thin film transistor array panel of claim 1, wherein entire bottom surfaces of
2 the data line and the drain electrode are disposed substantially on the semiconductor layer, the
3 data line and the drain electrode have substantially the same planar shape as the semiconductor
4 layer, and the semiconductor layer includes a portion that is not covered with the data line and
5 the drain electrode and disposed between the source electrode and the drain electrode.

1 13. The thin film transistor array panel of claim 1, wherein the first passivation layer
2 and the pixel electrode covers an entire surface of the color filter.

1 14. A liquid crystal display comprising:
2 a first substrate;
3 a first signal line disposed on the substrate;
4 a second line disposed on the substrate and intersecting the first signal line;
5 a thin film transistor connected to the first and the second signal lines;
6 a color filter disposed on the first substrate;
7 an insulating layer disposed on the color filter opposite the first and the second signal
8 lines and the thin film transistor and having an opening exposing the color filter;
9 a pixel electrode disposed on the color filter, connected to the thin film transistor,
10 overlapping the insulating layer, and located substantially in the opening of the insulating layer;
11 a second substrate facing the second substrate and spaced apart from the first substrate
12 with a gap;
13 a common electrode formed on the second substrate;
14 a light blocking member disposed on the common electrode; and
15 a liquid crystal layer filled in the gap between the first substrate and the second substrate.

1 15. The liquid crystal display of claim 14, wherein the insulating layer and the pixel
2 electrode covers an entire surface of the color filter.

1 16. The liquid crystal display of claim 14, wherein the light blocking member
2 includes a first portion maintaining the gap between the first substrate and the second substrate
3 and a second portion having a thickness lower than the first portion.

1 17. The liquid crystal display of claim 14, further comprising a spacer disposed
2 between the first substrate and the second substrate and maintaining the gap between the first
3 substrate and the second substrate.

1 18. The liquid crystal display of claim 17, wherein the spacer is located on the thin
2 film transistor.

1 19. The liquid crystal display of claim 14, wherein the liquid crystal layer has
2 negative dielectric anisotropy and is subject to vertically alignment.

1 20. The liquid crystal display of claim 14, wherein the common electrode has a
2 cutout.

1 21. A method of manufacturing a thin film transistor array panel, the method
2 comprising:
3 forming a plurality of gate lines on a substrate;
4 forming a first insulating layer on the gate lines;

5 forming a semiconductor layer on the first insulating layer;
6 forming a plurality of data lines and drain electrodes at least on the semiconductor layer;
7 forming a plurality of color filters, each containing one of red, green and blue pigments;
8 forming a second insulating layer at least on edges of the color filters, the second
9 insulating layer disposed opposite the data lines; and
10 forming a plurality of pixel electrodes on the color filters such that the pixel electrodes
11 and the second insulating layer cover an entire surface of the color filters.

1 22. The method of claim 21, further comprising:

2 forming a third insulating layer on the data lines and the drain electrodes.

1 23. The method of claim 21, wherein the second insulating layer comprises a plurality
2 of portions disposed opposite the gate lines.